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<u>L1</u>	HCV and ribavirin	1039	<u>L1</u>

END OF SEARCH HISTORY

=> ribavirin
L1 . . . 8754 RIBAVIRIN

=> HCV (l) antigen
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=> L6 and L4
L7 4 L6 AND L4

=> D L7 IBIB ABS 1-4

ACCESSION NUMBER: 1998:496820 BIOSIS

DOCUMENT NUMBER: PREV199800496820

TITLE: The antiviral compound **ribavirin** modulates the T helper (TH)1/Th2 subset balance in hepatitis B and C virus-specific immune responses.

AUTHOR(S): Hultgren, Catharina; Milich, David R.; Weiland, Ola; Sallberg, Matti [Reprint author]

CORPORATE SOURCE: Div. Clin. Virol., F68, Oral Microbiol., F88, Huddinge Univ. Hosp., S-141 86 Huddinge, Sweden

SOURCE: Journal of General Virology, (Oct., 1998) Vol. 79, No. 10, pp. 2381-2391. print.

CODEN: JGVIAIY. ISSN: 0022-1317.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 18 Nov 1998

Last Updated on STN: 18 Nov 1998

AB **Ribavirin** is effective in combination therapies against chronic hepatitis C virus (HCV) infection, although its direct antiviral properties are unclear. We therefore studied the immune-modulatory effects of **ribavirin** on hepatitis B virus (HBV)- and HCV-specific immune responses. During a 24 week placebo-controlled **ribavirin** trial in ten patients with chronic HCV infection, HCV antibodies and alanine aminotransferase (ALT) levels decreased transiently whereas the serum levels of HCV RNA remained stable. Effects of **ribavirin** on human and murine phytohaemagglutinin (PHA)-activated T cells included inhibition of in vitro proliferation and modulation of IL-2, IL-4, IFN-gamma and TNF-alpha levels. HBcAg- and HBeAg-specific IL-2 and IFN-gamma levels were 25-fold higher in mice immunized with HBV core- or e-antigens (HBcAg, HBeAg) while receiving **ribavirin** compared to untreated mice, but IL-4 and IL-6 remained constant. Concordantly, a slight shift was observed in the IgG subclass distribution of the humoral responses of **ribavirin**-treated mice to HBeAg and HCV NS3 protein. **Ribavirin** treatment of HBeAg-transgenic (HBeAg-Tg) mice induced a dose-dependent down-regulation of T helper (Th)2-mediated antibody production to HBeAg. In **ribavirin**-treated HBeAg-Tg mice anti-HBe IgG1 (positively regulated by Th2 cytokines) decreased simultaneously as both anti-HBe IgG2a (positively regulated by Th1 cytokines) levels and in vitro T-cell IFN-gamma production increased, indicating a change in the Th1/Th2 balance. Thus, the present data suggest that **ribavirin** is not strictly an antiviral compound, but rather it alters the T-cell balance in the immune system.

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Peptide immunogen mimicry of putative E1 glycoprotein-specific epitopes in hepatitis C virus.
J Virol. 1994 Jul;68(7):4420-6. Erratum in: J Virol 1994 Sep;68(9):6136.
PMID: 8207814 [PubMed - indexed for MEDLINE]
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PMID: 7684748 [PubMed - indexed for MEDLINE]

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J Virol. 1993 Mar;67(3):1385-95.
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Arch Virol Suppl. 1991;3:7-18. Review.